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Co-operation

AGENCY

INSIGHT

The need for co-operation

In today's increasing complex world, where many issues have global ramifications, the need for co-operation has never been greater. In the field of disaster planning and preparedness, it also holds true that no man, or organization is an island. Emergencies and disasters do not recognize municipal, provincial or national boundaries. When trouble does come, the most effective response is built on the co-operation of neighbors.

This issue of *Insight* looks at some recent examples where co-operation, mutual aid and the exchange of information are helping improve the level of preparedness on a number of fronts.

From the perspective of global neighborhoods, the 1990s have been

declared by the United Nations as the International Decade of Natural Disaster Reduction. Canada's initial steps in planning how to share its considerable expertise in this area, particularly to help developing countries, are discussed in an article on page 4.

On the national front, Rudy Willhauk describes on page 5 how Alberta and the federal government are co-operating in a support plan to help British Columbia in the event of a catastrophic earthquake. Within Alberta, John Piché writes on page 6 about how a unique partnership between the federal government, Alberta Public Safety Services and the province's Indian bands is resulting in improved emergency services on Indian reserves.

Two articles also look at ways that co-operation at the community level is helping make life safer for the residents of four Alberta municipalities: in the first article, on page 8, Ralph Holmes describes two mutual aid programs where industry and government are working together in Fort Saskatchewan and Strathcona County. The second story, on page 10, focuses on how new volunteer emergency teams are pitching in to help in the municipalities of Olds and Wetaskiwin.

Finally, since safety and co-operation begin at home, *Insight* includes an article by Grahame Blundell on page 11, who urges families to prepare their own disaster plans and practise them on Family Day next February 18.

Insight is published quarterly by Alberta Public Safety Services (APSS). The publication aims to inform readers about current developments concerning topics which relate to the mandate of APSS: to prepare for, respond to and follow up on man-made or natural disasters in Alberta. This mandate includes activities in the areas of disaster services and management, as well as the handling, offering and transporting of dangerous goods.

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On the Cover: Award-winning emergency response teams at Syncrude Canada Ltd. have worked closely with the community of Fort McMurray to establish a mutually supportive incident response plan. Photo by Ted Shehinski, Fort McMurray.

Alberta
PUBLIC SAFETY SERVICES



The Hon. Ken Kowalski (centre), Minister of Alberta Public Safety Services, recently hosted a meeting of emergency response ministers and their representatives. From the left are: the Hon. Maurice Byblow from the Yukon, and the Hon. Gilbert Clements from Prince Edward Island; Mr. Kowalski, the Hon. Hubert Seamans from New Brunswick, and the Hon. Grant Hodgins from Saskatchewan.

MAY FU

CANADIANA
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Learning from each other: Public safety the focus of national meeting

Insight recently spoke with the Hon. Ken Kowalski, Minister of Alberta Public Safety Services.

Mr. Kowalski, in September all the provinces and territories in Canada were represented at a meeting in Barrhead about emergency preparedness. What was the meeting about?

Well, you are not quite correct. Quebec was not present, but other than that unfortunate absence, every province, territory and the federal government were represented by their respective ministers, representatives or observers. We got together so that we could learn from each other and decide on several items of major importance to everyone in Canada.

Can you tell me specifically what you discussed and what decisions were made?

Yes, and I am glad to do so. One of the most important items was training. There is a serious lack of training of emergency response personnel in Canada. Manitoba, representing a national working group, presented an interim report as to how to increase the numbers of trained people in the country. This report was discussed and we requested that the study be completed by year end, after which it will go to the respective ministers for immediate consideration.

Another important point was to decide on Canada's response to the United Nations declaration of the 1990s as the International Decade for Natural Disaster Reduction. There is

a great deal that Canada can contribute to Third World countries that is not necessarily high-tech or expensive, but which is simple, effective and can save lives. We also discussed how we could deal with a Bhopal-type accident in Canada, and what to do about emergency response to disasters on federal lands in the provinces. The list goes on and on.

Was this a meeting attended only by ministers and civil servants all of whom may well know each other and perhaps have a limited view of emergencies?

I do not think anyone working in the emergency preparedness field has a limited view. You know, without being too idealistic, I think I can say that today, we are constantly concerned with saving lives and trying to mitigate the effects of disasters. On the whole, I believe that by working together, we strive successfully for this objective.

However, to answer your specific question, we did have two outside speakers: Dr. A. G. Davenport from the University of Western Ontario, who is the chairman of the joint committee of the Royal Society of Canada and the Engineering Academy of Canada, spoke to us about the International Decade of Natural Disaster Reduction, as did Jean Belanger, President of the Canadian Chemical Producers' Association and Chairman of the Major Industrial Accidents Co-ordinating Committee (MIACC).

MIACC is the body which was set up

after the Bhopal tragedy to take all possible steps to prevent such an accident from ever occurring in Canada. MIACC, an organization unique to Canada, brings together the three orders of government, business and trade associations, the academic community and industry. MIACC meets regularly to encourage voluntary compliance with recommendations that ultimately will not only make a Canadian Bhopal very unlikely, but will also ensure that should Canada ever suffer such a disaster, the effects will not be as devastating as they were in India.

Did the delegates leave Barrhead feeling that they had a worthwhile meeting?

Yes. Not only was everyone very pleased with the arrangements, but more importantly, the meeting advanced awareness of our ever increasing need to improve public safety in Canada. We will meet again in the Yukon in 1991 and in New Brunswick in 1992. We also decided that in future we will meet as a Council of Ministers. This means that all future decisions will have even more weight in Canada's federal, provincial and municipal governments. You know, it really was a good, positive and constructive meeting. I really look forward to next year's meeting in the Yukon.





GOV'T OF ALBERTA

Canada could make a significant contribution to help reduce natural disasters around the world.

Sharing the wealth:

Canada can help the world reduce natural disasters

Last summer, major floods swept through many of Alberta's river systems. Despite these disasters, there were no injuries and no loss of life.

This is due largely to the constant vigilance of Alberta Environment's River Forecast Centre, which uses automatic weather stations, satellites and computers to monitor the province's rivers. Early warnings were provided to threatened municipalities, which took vigorous actions to warn people and to protect property.

This fortuitous situation is a far cry from what routinely occurs in developing countries when a natural disaster strikes.

"When I lived in northern India, a flood like the ones that occurred in Alberta this year would cause casualties in the hundreds," says Mark Egener, the Managing Director of Alberta Public Safety Services. "There was a lack of systems for flood prediction, public warning and appropriate mitigative action." Mr. Egener says that the technology and knowledge used to prevent a similar situation from happening here is just one example of what could be applied in the Third World to help save lives. In fact, Canada has a great deal of expertise to offer developing nations to reduce the increasingly devastating impact of natural disasters.

Canada's possible role in sharing its expertise was the subject of a speech delivered by Dr. Alan Davenport last

September in Barrhead, Alberta to a special meeting of emergency preparedness ministers and their representatives from across the country. Dr. Davenport, the Director of the Boundary Layer Wind Tunnel at the University of Western Ontario, is Chairman of a joint committee established by the Royal Society of Canada and the Canadian Academy of Engineering to formulate Canada's response to the current International Decade of Natural Disaster Reduction.

Canada was a co-sponsor of the United Nations resolution that proclaimed the international decade, and was adopted by the General Assembly on Dec. 22, 1989. The broad purposes of the decade are to tap scientific and engineering knowledge to reduce the number of natural disasters, and to be better prepared when they do happen.

In his speech, Dr. Davenport discussed the findings of the joint committee, which are summarized in its recent report, *Toward a Canadian Program for the International Decade for Natural Disaster Reduction*. The committee examined the resources and responsibilities for emergency preparedness and disaster management across the country, including everything from government departments to industry, banks, the media, research institutes, universities and the Red Cross. What the committee found is that Canada has a wealth of resources that could make a major contribution to the decade through its engineering

expertise, industrial products and equipment.

After Dr. Davenport's presentation, delegates at the emergency preparedness conference reached a consensus to endorse Canada's participation in the international decade, and to support the recommendations of the committee's report, including the establishment of a national committee "with representation from all levels of government, the scientific, technical and engineering communities, the insurance and financial organizations, the relief agencies and other organizations concerned with disaster management and research."

The delegates also agreed to establish a working group "to consider ways and means for the departments of emergency preparedness in the provincial governments to show leadership and to participate in the program of the Canadian component of the decade."

The joint committee's report is just the beginning of the work that Canada could contribute to make the International Decade of Natural Disaster Reduction a success. As the report's summary states: "This report aims to push the boat out from the shore; its voyage will depend on the participation and the contributions of knowledge from the various sectors of the Canadian community toward reducing natural disasters."



GOVT OF ALBERTA

Alberta is preparing to help British Columbia in the event of a major earthquake, including providing medical services to evacuees.

Good neighbors:

Governments co-operate on B.C. quake relief plan

by Rudy Willhauk,
Director, Plans and Operations

Seismologists have been predicting for some time that a major subduction earthquake causing catastrophic damage could occur on the lower mainland and Vancouver Island of British Columbia. It may not happen for 200 years — but it could also happen tomorrow.

Casualties and fatalities could be in the thousands; bridges would be severely damaged; buildings, dikes and highway overpasses would collapse, and there is even a threat of a major tsunami that could add to the chaos. Recovery and restoration operations would be enormous and probably beyond the immediate capability of in-place emergency services.

Federal and provincial authorities have recognized that such a catastrophe would require the resources and capabilities of all orders of government and the private sector to support life-saving activities, immediate post-disaster social and medical care, damage analysis and restoration and recovery operations. A national support plan for a catastrophic earthquake has been drafted and British Columbia has also developed an earthquake plan. Several seminars and crisis management workshops have been held in British Columbia in the past year to examine these plans and identify crucial areas of concern.

Acute need for help

While the national plan identifies the overall approach to assist the province of British Columbia, the demands for assistance on all public and private sectors will be more acute in Alberta than in other regions of Canada because of its position as the nearest neighbor. Little help can be expected from the United States since portions of the west coast would also be affected by an earthquake.

In recognition of these facts, Alberta and the Regional Director of Emergency Preparedness Canada have agreed to a co-operative arrangement to develop a joint Alberta support plan to co-ordinate and integrate activities to help British Columbia. In February 1990, a workshop was held in Edmonton for representatives of federal, provincial and municipal governments, and non-government organizations such as the Red Cross. The purpose of the workshop was to introduce anticipated support requirements to all participating response agencies and to solicit their thoughts for developing a concept for a co-ordinated response system.

The concept agreed on was to establish a joint management centre at the Alberta Government Emergency Operations Centre (GEOC) staffed by federal, provincial and non-government organizations. On receipt of requests for support from British Columbia, Alberta resource groups will work to fill the require-

ments through public or private sources.

Once the necessary resources are identified and mobilized, they will be delivered to federally managed staging areas in Edmonton and Calgary for assembly, packaging and transportation to advanced holding zones in British Columbia. The staging areas will also act as reception areas for medical and other evacuees from British Columbia if required. Requests for assistance that cannot be met from Alberta sources will be forwarded to the federal co-ordination centre in Ottawa for action.

Draft support plan ready

The system developed must include the following:

- joint resource management system
- procedures to identify and mobilize resources
- assembly, packaging and transportation of resources
- provision of public information and advice regarding response to B.C.
- registration of public offers of assistance
- locating, recruiting, outfitting and dispatch of individuals or groups with specialized skills (structural engineers, rescue teams)
- reception, sheltering and social or medical services for evacuees
- effective communications

John Piché (right) meets with representatives of the RCMP, tribal police, the Samson Band and emergency services staff to develop an emergency response plan for the Four Bands of Hobema.



JOHN PICHE

Alberta Public Safety Services and Emergency Preparedness Canada have completed the initial draft of the support plan, and a workshop was held in November to give participating agencies the opportunity to review the plan, identify their anticipated roles and ensure co-ordination mechanisms are in place to respond quickly and effectively. Once the plan is approved, an exercise will be scheduled in 1991 to fully test the system, identify any shortfalls and take corrective actions as necessary.

Once all emergency plans are in place, there should be a mutual support system at both the national and provincial levels to ensure assistance can be provided in a co-operative and co-ordinated manner to B.C., or any other area in Canada.

Improving emergency preparedness: A unique partnership is helping Alberta's Indian bands

by John Patrick Piché,
District Officer, Indian Bands

Editor's Note: Mr. Piché, a Treaty Indian from Cold Lake First Nations, began a two-year community-based project with the Field Services Branch in December 1989 to help develop disaster preparedness and emergency response on Indian reserves in Alberta.

When I was asked to write about the state of emergency preparedness on Alberta's Indian reserves, it occurred to me that a lot of people are unfamiliar with this province's aboriginal First Nations. I will attempt, therefore, to give a brief historical perspective to the present day.

The establishment of Alberta's Indian bands was the result of the signing of Treaty 7 in 1877, which covered southern Alberta, Treaty 6 in 1876 for the central Alberta region, and Treaty 8 in 1899 for northern Alberta. Up to that point, aboriginal people were nomadic and travelled vast areas in search of food. Documented history tells us that at that time, large numbers of Indian people were dying of malnutrition and diseases such as smallpox and influenza. Conditions have greatly improved since the turn of the century. Access to medical treatments, new roads, communications, on-reserve facilities and programs have all helped in the delivery of services to First Nations.

Emergency preparedness is not a

new concept to most Alberta bands. In the last 20 years, bands have taken over emergency services previously provided by Indian and Northern Affairs Canada on a contractual basis. Some of Alberta's 43 bands now have first response capabilities. To date, 25 bands have fire stations, 10 have a full on-reserve ambulance service and 15 bands have police services. Some bands have access to emergency services within a reasonable response time, while others must rely solely on Medi-Vac or Air-Ambulance due to their remote locations.

Emergency services at the band level have largely depended on the band's financial resources, including oil and gas revenues, tourism and band economic development initiatives, to mention a few. Resource-rich bands have used their revenues to purchase equipment either outright or on a cost-shared or joint-venture basis. In concert with obtaining equipment, these bands have instituted emergency program development and personnel training.

Dire risks for a few bands

However, not all bands have had the financial resources to establish emergency services for their communities. Some smaller, more isolated northern bands are a good example. Horror stories — such as the community watching helplessly as a neighbor's house burns to the ground — are not uncommon. Many



JOHN PICHE

The Four Bands of Hobbema are well equipped to handle emergencies.

communities have response times as high as an hour or more.

At times, whole communities lose power or telephone services for days at a time. Their lifeline to the outside world is severed, putting them at dire risk should a disaster or emergency arise. These situations involve, for the most part, only a handful of bands. Their leaders have consistently worked toward improving conditions and services to their members.

The advent of self-government, to which all Indian bands aspire, has also produced the political will in governments to allow more autonomy by transferring programs and services to local bands. Alberta's political Indian organizations, such as the Indian Association of Alberta, have been instrumental in the development and promotion of band self-government.

In Alberta, there are seven tribal councils made up of member bands set up on a regional basis, similar to counties. The exception to these are the seven independent bands in central Alberta not affiliated with a tribal council. Each band has an elected chief and council who administer the affairs of the band. The federal legislation under which Indian bands operate at present is the Indian Act, which governs all aspects of Alberta and Canada's First Nations.

A partnership is born

Jurisdictional disputes have been a longtime thorn in the backsides of both the provincial government, which provides services, and the Indian bands under federal jurisdiction. Recently, Alberta Public Safety Services (APSS) entered the scene, when the signing of an agreement

between APSS and Indian and Northern Affairs Canada established a unique partnership arrangement.

Since Indian Affairs had neither the manpower nor the expertise to deal with disasters, it was agreed that APSS would deliver this service on a contractual basis. Since my appointment in December 1989, the parties involved have established an office at the APSS Edmonton District Office, and have begun the job of gathering data on Indian bands in earnest. Along with the excellent training I received at the APSS Training School in Edmonton, the managers and staff of APSS have given me the guidance and special insight needed to develop an effective working relationship with all three levels of government involved: federal, provincial and First Nations.

The next step was to develop an orientation presentation for tribal councils, band councils and band emergency services groups. To date, 30 of the 43 Alberta Indian bands have received the orientation through their respective tribal associations and/or band councils, and all bands are expected to be reached by the end of the year. All bands, without exception, have been very positive about the concept of emergency preparedness.

Into the mainstream

Future plans include the establishment of disaster service agencies and the appointment of directors of disaster services who, as a group, will develop emergency operations plans for their communities. Two southern bands, the Bloods and the Stony Band, have submitted draft plans which must yet be ratified by

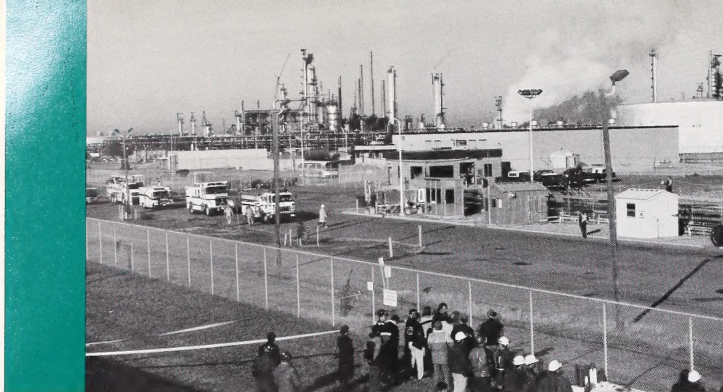
band council. Considering that Alberta Indian bands are 40 years behind their municipal counterparts, the desire of band leaders to bring themselves into the mainstream of emergency preparedness in Alberta is understandable. With training available at the APSS Training School and the Emergency Preparedness College in Arnprior, Ontario, it is hoped that all Alberta bands will be fully operational in this area by the year 2000.

It's important to note that Indian and Northern Affairs Canada has taken a proactive role by commissioning a study to assess emergency preparedness on First Nations across the country. The results of the study, being conducted by NovaTec Consultants of Vancouver, will have a direct impact on issues such as legislation, funding arrangements, and roles and responsibilities. A generic plan is also being developed specifically for First Nations, which is not much different from Alberta's municipal plans. The study should be completed this year, and if acceptable, implemented shortly afterward.

Fail to plan, plan to fail

In closing, I would add that the encouragement of the management and staff of APSS and the positive reception from Alberta's First Nations have made our progress possible. In these troubled and uncertain times, it's good to know people can put their differences aside to achieve our common goal — to act now to ensure the safety and well-being of all Albertans.

Otherwise, as they say, if you fail to plan, you plan to fail.



MAY FU

This year's annual exercise for the Strathcona District Mutual Aid Program involved a fire in the propane unit at Esso's Strathcona Refinery.

Industrial mutual aid: Working together for a safer community

by Ralph Holmes,
Co-ordinator, Industrial Programs

Fire, police and ambulance personnel in Canadian communities handle emergency situations every day. They provide professional services that protect life, health and property very effectively.

Occasionally, a large emergency arises where a community does not have the depth of resources to bring the incident quickly under control. Some examples of these situations include the Edmonton tornado, the forest fires in northern Manitoba in 1989, and the Mississauga train derailment in 1979. The traditional approach in handling these emergencies is to request mutual aid from other municipalities. Some of these emergencies involve major industrial or transportation accidents where chemical substances or other specialized hazards are present. These incidents generally require special equipment and expertise.

Where can a source of mutual assistance and technical expertise be found? In some areas, it is the industrial mutual aid association. Typically the mandate of these association is to:

- identify and reduce the risk of accidents from hazardous substances in the industrial setting;
- identify methods that prevent recurrences of any accidents;
- provide mutual aid to members in the event of an emergency;
- assist the local community in

preparing for emergencies at their facilities or with their products;

- provide for public safety; and
- conduct multi-agency exercises that test emergency plans.

In the greater Edmonton area, there are two industrial mutual assistance programs — the Fort Saskatchewan and Region Mutual Aid Organization and the Strathcona District Mutual Assistance Program, which are both very active within their communities.

The organization of the Fort Saskatchewan and Region Mutual Aid Organization (FORT MAP) consists of members and interested parties who conduct their activities as directed by the membership at eight meetings a year. The meetings are held at a different member's site each time and are followed by site familiarization tours.

The members are the core of the organization and provide a major portion of the resources to the organization. Currently, the members include: Sherritt Gordon Ltd., Marsulex, Dow Chemical Canada Inc., Thio-Pet Chemicals Ltd., Liquid Carbonic Inc., Chevron Canada Resources Ltd., Union Carbide Ltd., B.F. Goodrich, Alberta Food Products, Fort Saskatchewan Correctional Centre, Norcen Energy Resources Ltd., Shell Canada Ltd., Esso Chemical Alberta, Northwestern Utilities Ltd., Procor Ltd., Canron West Pipe, CN Rail, City of Fort Saskatchewan, Edmonton

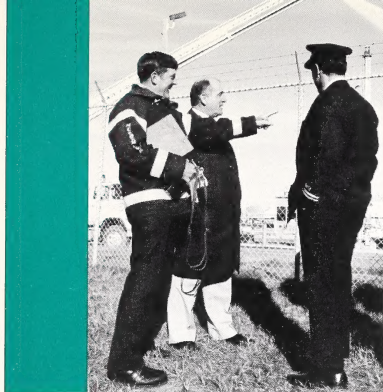
Institution, Amoco Canada Petroleum Company Ltd., and Strathcona Disaster Services.

Interested parties are those organizations which would become involved in the event of a major incident, including the RCMP, Fort Saskatchewan Fire Department, Superior Ambulance, the General Hospital in Edmonton, Alberta Hospital in Edmonton, Alberta Public Safety Services and the Edmonton Institution.

A co-operative effort

The goal of the Strathcona District Mutual Assistance Program (SDMAP) is to provide a safer community through emergency planning achieved by a co-operative effort between government and industry. The focus of SDMAP's activities is along Refinery Row, a heavy industrial area which extends from the east side of the City of Edmonton into Strathcona County. SDMAP carries out its activities through five executive and five general membership meetings per year. Again, the meetings are held at various locations. The various committees meet as required.

The members of SDMAP include: Strathcona County Fire Department, Strathcona County, RCMP, City of Edmonton Fire Department, Edmonton Police Service, Edmonton Ambulance Authority, Edmonton Disaster Services, Esso Petroleum Canada, Petro-Canada Refinery, Stelco Steel,



MAY FU

Observers from government, industry and emergency services watch the response at the annual exercise of the Strathcona District Mutual Aid Program.

Alcan Smelters and Chemicals Ltd., Interprovincial Pipe Line Co., Celanese Canada Inc., A.T. Plastics Inc., Turbo Resources Ltd. Fiberglass Canada Ltd., TransAlta Utilities Corporation, Shell Canada Ltd., Peace Pipe Line Ltd., Syncrude Research, Union Carbide Ltd., Trans Mountain Pipeline, Northwestern Utilities Ltd., Building Products of Canada, Harrison & Crossfield, Procor Ltd., Shaw Pipe Protection Ltd. and Alberta Public Safety Services.

The MAP associations have three standing committees — hazards and resources inventory, emergency planning, and exercise planning. Most of the ongoing work of the associations is carried out by these committees.

Identifying hazards

The Hazards and Resources Inventory Committee ensures that all the hazards are identified at each member's site, or those off-site hazards that are associated with a member's operation. Once these hazards have been identified, consideration is made either to reduce the hazard or to ensure that the member is prepared to respond effectively to any potential emergency situation. This information is then turned over to the local fire department, where it is maintained in a database.

The committee also compiles and maintains a resource inventory of trained personnel and emergency equipment, as well as a catalogue of videos useful in training personnel. These resources are invaluable in the event that the mutual assistance program is activated.

The Emergency Planning Committee

ensures emergency plans are in place for individual member organizations, as well as a mutual assistance plan for the MAP association.

As a result of the emergency planning process, a number of projects have been identified as essential areas to address by the MAP associations. Some of the projects are at the study stage, while others have been completed. The projects include:

- assessing the mutual aid capacity of members;
- ensuring that all member organizations have compatible emergency response equipment;
- formalizing industrial/municipal aid response procedures;
- studying dispersion modelling for toxic releases;
- examining the potential impact of a major industrial accident upon the public and the community;
- implementing a dedicated mutual-aid radio frequency to allow communication between member organizations and municipalities;
- implementing a severe weather warning system with a call-down procedure to member organizations;
- implementing an instant alert system by radio to neighboring companies and special facilities such as schools, hospitals and nursing homes to be activated in the event of an emergency;
- implementing emergency public warning systems;
- issuing emergency passes to key response and operation personnel; and
- the promotion of community awareness.

The Exercise Planning Committee designs, organizes and sets the objectives of each tabletop or field exercise carried out by the MAP association. The committee ensures that each phase of the exercise is evaluated. After the exercise, there is a debriefing where any lessons learned are incorporated into emergency plans and procedures to result in a more effective response.

Partners for safer communities

An industrial mutual assistance program is a critical part of any community where there is an industrial presence. When industry, government and the emergency services work together to reduce the risk and provide a fast, effective response to major emergencies, we have a partnership that makes safer communities for all of us.





Wetaskiwin's new volunteer emergency team took part in a public demonstration at the local Pioneer Days last summer.

WARNA MOORE

A tale of two communities: Volunteer emergency teams stand by

by Cheryl Edwards, Insight Editor

When the next emergency strikes in Olds or Wetaskiwin, local first responders know they can depend on the experienced back-up of local citizens. In the last year, both places have produced and trained dedicated teams of emergency volunteers who have been working hard to make their communities safer.

While the newer Wetaskiwin team has happily remained untested by a real emergency, the Olds Emergency Response Team has already demonstrated its effectiveness. Before the team had even completed its training, it found itself coping with four emergencies in four months, including a major hotel fire and finding room for 600 people, a load of rabbits and some prize chickens stranded in snowstorms earlier this year.

The volunteer emergency teams are the first of their kind in Alberta, and are helping meet a perennial challenge. "We're in a situation that a majority of municipalities here face: we're too small to afford a paid force for fire prevention, fire fighting and rescue, so we have to take advantage of volunteers," says Don Proudlock, Wetaskiwin's Director of Disaster Services. "In fact, most of the work that gets done in a disaster situation is done by these volunteer groups, and they need some background knowledge so we don't end up rescuing the rescuers."

During an emergency, the role of the

new volunteer teams is to help their first responders, not take over their jobs. In Wetaskiwin, the emergency response team is integrated with the local fire department. The Olds Emergency Response Team, which began training in the fall of 1989, works directly with the town's disaster services and the three local emergency services — the fire department, RCMP and ambulance service.

The Olds team is the brainchild of two safety-minded individuals: Carol Ringheim and Terry Dodd, who are the team's co-ordinators. Not long after the Edmonton tornado in 1987, Mrs. Ringheim took a disaster services management course at the Alberta Public Safety Services (APSS) Training School, and she began wondering how her town would cope in a major emergency. "In a small town like ours, the fire department is expected to do everything and be everywhere," Mrs. Ringheim says. "I started thinking that a volunteer team might be able to take some of the strain off the department and get all three services working together for a common goal."

She took her idea to the local emergency services and presented it by asking them what they thought a team might do to help. That question sparked what Mrs. Ringheim says has been a real community effort in training an 18-member team that comes complete with its own uniform, logo and a former school bus being converted into an emergency vehicle.

The Olds and Wetaskiwin teams each train year round. In Olds, the APSS Training School has delivered courses to the team in basic rescue and stress management, and assisted Mrs. Ringheim and Terry Ringheim in instructing courses on building searches and running a reception centre. The rest of the training has been done by the local emergency services, starting with first aid from a local RCMP officer who is a St. John Ambulance instructor. The town's ambulance service has provided instruction in patient monitoring, triage and assisting emergency medical technicians; the RCMP has taught crowd control, evacuation and search procedures; and the fire department has trained the team in everything from rolling hoses to radio communications.

The Olds fire department has already seen the benefits of its training: at a major fire that destroyed a turn-of-the-century hotel last February, the emergency response team rolled hoses, helped firefighters with their air tanks, ran errands and brought coffee. "It gave the firemen a chance to stay at their posts and keep working," says Mrs. Ringheim.

In Wetaskiwin, 27 people, including half the volunteer fire department, took the APSS course in basic rescue last spring. The goal now is to boost the team's membership to 40, and to get further training, possibly in search and rescue, and airport disasters.

The new team is also working to

Each family needs to make a disaster plan to suit its needs.



GOVT OF ALBERTA

increase public awareness about Wetaskiwin's emergency response capability. Last August, the team took part in a demonstration to show its capabilities at the local Pioneer Days. Once the team has completed further training, it and rescue leader Ted Pringle are "looking forward to a little friendly competition with the Olds team to spread interest from municipality to municipality, and get more people aware that these teams exist," says Mr. Proudlock.

Olds and Wetaskiwin are now in the process of revamping their disaster plans to help them prepare for the real potential for a major event to occur in their communities. Both, for example, are located on major rail and trucking routes, and are under the flight paths of international airports.

"We could end up with a Hinton or a Mississauga," says Mr. Proudlock. "It's going to happen some time, but if we have volunteers who know what to do immediately, then there is less chance of something getting away from us."

Says Mrs. Ringheim: "Being prepared is half the battle. A disaster may never happen, but at least our town is prepared, and that is how you save lives."

On Family Day: Rehearse your family's disaster plan

by Grahame Blundell,
Director of Communications

In February 1989, Alberta celebrated the first Family Day public holiday. Alberta is the only province in Canada to have such a holiday, and this reflects the commitment by Premier Don Getty to do all he can to confirm and emphasize the basic importance of the family unit as the basis of our history, present culture and the rock upon which the future will be built.

Fundamental to the unity of the family is its well-being and physical safety. At Alberta Public Safety Services, it is accepted that all safety programs begin at the family level. It is, therefore, logical to use the holiday as an opportunity to promote family safety.

For many years, APSS has provided a variety of printed information on safety and what to do during disasters such as floods and tornadoes. Many school districts also offer courses, usually at the junior high level, to raise public awareness about possible hazards that everyone is more than likely to face.

Is your family prepared?

To take this one stage further, APSS is advising every family in Alberta to have its own disaster plan to suit its needs, and to rehearse it on Family Day next February 18. This plan does not have to be elaborate. It does not have to be written down, although in families with children who can read,

it is wise to do so.

To start, every family should first do a hazard analysis and assess possible threats. People who live on floodplains, for example, should know now what to do when — and if — a flood strikes, and what steps to take on returning home. Each family should come up with answers to questions such as: what should be done now to prepare for a power failure in the middle of winter? How is the home to be evacuated in case of fire? Much of the information that each family needs to prepare its plan is readily available by telephoning the local municipal office or Alberta Public Safety Services.

No plan, however good, is workable if it is not rehearsed. Every plan should be practised once a year and updated annually by incorporating the lessons learned at the rehearsal into the plan.

A few moments, spent now, can and will save lives in the future. Is your family worth half an hour? It takes about 30 minutes a year to prepare for an event that may never happen, but if it does happen — as it will to some people reading this story — your family will at least be able to act quickly and decisively. By knowing what to do, their lives could be saved.



KEN CARLSON

Co-operation starts at the local level.

Co-operation in Emergency Preparedness and Planning: A Selected Bibliography of Materials Available from the Alberta Public Safety Services Library

Compiled by Teresa Richey,
APSS Librarian

To borrow material listed, send an inter-library loan request form (no personal requests, please) to Alberta Public Safety Services Library, 10320 - 146 Street, Edmonton, Alberta, Canada T5N 3A2. Materials located in the Coordination and Information Centre, at our Training School, the Government Emergency Operations Centre, the Serials collection or our Reference Collection cannot be borrowed but can be referred to in the library.

Anderson, Mary B. and Peter J. Woodrow. **Rising from the Ashes: Development Strategies in Times of Disaster.** Boulder, Colorado: Westview Press, 1989. 338 p.

HV 553 .A58 1989, MAIN LIBRARY

Discusses how non-government agencies can help and give aid after a disaster. Divided into two parts: what should happen and what does happen when responding to a disaster. Thirty case studies from the three main geographic areas most commonly affected by disasters — Asia, Africa and Latin America. Attempts to provide "outsider" (non-government) agencies with the tools to assist devastated areas in recovering socially and economically on a short and long-term basis. Emphasizing the need for information, preparation and co-operation between government and volunteer personnel, its analysis of what people in a devastated area need, want, and expect. Also applies to government agencies. Includes bibliographies.

Britton, Neil R. **Anticipating the Unexpected: Is the Bureaucracy Able to Come to the Party?** Sydney, Australia : Disaster Management Studies Centre, (Working Paper Series 1), 1989. 37 p.

NOT YET CATALOGUED

How much effort in disaster management is directed at "fulfilling mission objectives rather than pursuing administrative means and ends"? Mission oriented actions are necessary in order to be relevant within any "disaster-relevant organizational network (DRON)". In this way, these organizations will be better able to rise to

their potential contribution in a disaster situation. This potential is generally underestimated or ignored on the whole by society. Examples used from the New South Wales State Emergency Services. Includes bibliography.

Britton, Neil R. **Reflections on Australian Disaster Management: A Critique of the Administration of Social Crisis.** Sydney, Australia : Disaster Management Studies Centre, (Working Paper Series 3), [1989], 47 p.

NOT YET CATALOGUED

Development of counter-disaster policy in Australia seems to be imbedded in civil defence arrangements developed after World War II. The effectiveness of these policies are looked at in the light of history, Australia's disaster potential, both natural and technological, public administration and intergovernmental co-operation. Discusses the need to put aside "bureaucratic imperative" and work on co-operation between agencies involved in the disaster management system. Includes bibliography.

Communicating with the Public about Major Accident Hazards. Edited by H.B.F. Gow and H. Otway. New York : Elsevier Applied Science, 1990. 623 p.

HD 61 .C65 1989, MAIN LIBRARY

Conference held in Varese, Italy, 1989 by the European Conference on Communicating with the Public about Major Accident Hazards. Provided a forum for a broad range of groups to share information on hazard communication. Among the conclusions were the need to implement public information provisions, build best-practice guidelines, encourage systematic evaluation of hazardous situations, clarify the legal ramifications of hazards involving more than one legal jurisdiction, consider the transnational implications of hazards and ensure successful partnership between all organizations involved with risk management. Over 40 papers presented from all levels of government and industry. Includes bibliographies.

A Concept of Operations for Emergency Site Management. Ottawa, Ontario : Emergency Preparedness Canada, n.d. 36 p.

HV 553 .C66, MAIN LIBRARY

Everson, Peter R. **A Selective Review of Information Technology and its Application to**

Emergency Planning and Response. Ottawa, Ontario : Emergency Preparedness Canada, 1986. 81 p.

HV 553 .C2 E93 1986, MAIN LIBRARY

The Natural Hazards Data Resources Directory. Compiled and Edited by Leaura M. Hennig. Boulder, Colorado : National Geophysical Data Center, 1990. 247 p.

NOT YET CATALOGUED

Jointly published by the Natural Hazards Research and Applications Information Centre and the National Oceanic and Atmospheric Administration, both in Boulder, Colorado, this directory provides timely access to resource centres holding information on natural hazards. Divided into three main sections, geological hazards, meteorological hazards, and societal response, the directory also includes information on State and Federal (U.S.) offices, Sea Grant Programs, Water Resources Research Institutes and the World Health Organization. Indexed by organization and by geographic location (international and United States).

Nudell, Mayer and Norman Antokol. **The Handbook for Effective Emergency and Crisis Management.** Lexington, Mass. : Lexington Books, 1988. 192 p.

HD 49 .N83, MAIN LIBRARY

Procedures for the Coordination of Crisis Management Operations. Ottawa, Ontario : Emergency Planning Canada, 1981. 12 p.

HV 555 .C2 P76, MAIN LIBRARY

Reducing Disasters' Toll: The United States Decade for Natural Disaster Reduction.

Advisory Committee on the International Decade for Natural Hazard Reduction. Washington, D.C. : National Academy Press, 1989. 40 p.

NOT YET CATALOGUED



Risk managers walk around fractures in the ice to reduce the probability of falling through.

GOVT OF ALBERTA

Too simplistic:

Risk management is more than reducing the probability of accidents

Viewpoint gives you, the reader, a soap-box to stand on and air your views. Start a debate: send your beefs and bouquets to Viewpoint, in care of Insight's managing editor. Views expressed here do not necessarily reflect those of Alberta Public Safety Services.

by Jim Wright,
Risk Management Branch,
Transport Dangerous Goods,
Transport Canada

Editor's Note: Mr. Wright is commenting on the March 1990 issue of Insight, in particular an article called Risk Management in a Technological Society, written by Dr. John Shortreed, Associate Director of the Institute for Risk Research at the University of Waterloo. The opinions expressed here are Mr. Wright's, not necessarily those of Transport Canada. Mr. Wright's article appears here in condensed form.

Risk management is being portrayed in the academic community as simply reducing the *probability* of accidental death, physical injury, property loss or environmental impairment. This approach is much too simplistic, however, and fails to consider two more critical elements of the risk management process: risk control and risk financing.

The risk manager seeks not only to reduce the probability of an accident happening, but to reduce the consequences of the accident after it has occurred. And since not all losses can

be mitigated entirely, the risk manager must also consider options for financing these accidental losses.

This brings us to what should be considered as a proper definition of risk management and the risk management process. The Risk and Insurance Management Society (RIMS), the world's largest association of risk management professionals and the sponsor of the Insurance Institute of America's Associate in Risk Management Program, offers such a definition. As a managerial or administrative function, risk management is: "the process of planning, organizing, leading and controlling the activities of an organization in order to minimize the adverse effects of accidental losses on that organization at a reasonable cost."

Steps in risk management

Professionals becoming involved in risk management can be misled in their efforts by overly simplistic approaches to identifying, assessing and dealing with risk. Rather than looking solely at accident probabilities and jumping immediately on single action remedies, a more methodological and comprehensive approach has become standard among professional risk managers. As a decision-making process, the steps in risk management are:

1. Identify exposures to accidental loss which may interfere with an

- organization's basic objectives;
2. Examine feasible, alternative, risk management techniques for dealing with these exposures;
3. Select the apparently best risk management technique(s);
4. Implement the chosen risk management technique(s);
5. Monitor the results of the chosen technique(s) to assure that the risk management program remains effective. This step is overlooked by most organizations, including government agencies.

Another risk management term that is frequently misused is *risk*. The opinion of some schools of thought is that risk is simply the probability of death, physical injury, property loss or environmental impairment. Again, this fails to consider the magnitude or consequence side of losses.

Consider the following example. A person is walking across a frozen lake. Because of hidden fractures within the ice, this person stands a 20 per cent probability of accidentally stepping on a fracture and breaking through the ice.

For those who consider only probability, this individual would be exposed to the same *risk* regardless of whether the water was six inches deep or six feet deep. There is no consideration that the consequences of falling into six feet of water far exceed those of falling into six inches of water.

Carry extra socks

Risk managers would attempt to reduce their risk by walking around fractures to reduce the probability of falling through. They would also act to reduce the consequences of falling through the ice by walking close to the shoreline where the water is shallow. Knowing that there was still a risk of getting wet, the risk manager would also carry a change of socks to handle the situation where neither the probability nor the consequences were totally eliminated.

Risk, which includes elements of both probability and consequence, can be referred to mathematically as the *expected value of a loss*, or: **RISK PROBABILITY x CONSEQUENCES**. The risk management process deals with both the probability of a loss occurring *and* the impact of the loss on the organization's basic objectives. As a third element, the risk management process deals with the financing alternatives for those losses that are unavoidable.

Risk management is free

In his article in *Insight* Dr. Shortreed states that, "Risk management is not 'free': we must give up our labor and other resources to reduce risk. This means that to reduce the probability of premature death, we must give up our life's time with 100 percent certainty." He also writes: "Risk management is the process of trading off life for the probability of death." These statements are at the very least misleading and in many cases they are simply untrue.

If we avoid crossing the street when there are cars passing by, we are reducing the probability of prema-

ture death but we are not trading off life to do this. Locking our car door is a risk management technique that certainly does not generate labor or resource costs but definitely reduces the risk of theft.

Choosing a safe route over a less safe route for the transport of dangerous goods does not necessarily generate incremental costs for an organization, but the savings associated with potential losses avoided can often be measured in millions of dollars. The fact is that many risk management techniques practised by both individuals and organizations do not necessitate additional expenditures of either time or resources. They *are* free.

Benefits and costs

Organizations that face loss exposures incur a cost of risk for both actual and potential accidental losses. Organizations are also deterred from potentially profitable activities because these activities are considered too risky to attempt.

The cost of risk is the sum of the following:

1. The cost of accidental losses are not reimbursed by insurance or other outside sources. This would include insurance deductibles, losses above insured limits, and retained losses, whether voluntary or unexpected.
2. Insurance premiums or payments to other outside organizations.
3. The costs associated with the risk control measures that are implemented.
4. The administrative cost of risk management.

A good risk management program

will minimize the overall cost of risk of an organization's current activities and allow the organization to pursue activities it previously thought to be not worth the cost of risk.

Staff Matters

Scott Bricker, the Director of Training for Alberta Public Safety Services (APSS), retired in October after 15 years at APSS. Scott joined APSS as a training officer in 1975 after almost three decades with the Canadian Armed Forces, and was promoted to Director, Training Division in 1980.

Don Clark, formerly Senior Compliance Officer at the Co-ordination and Information Centre in Edmonton, has transferred to the Calgary District Office as a Dangerous Goods Inspector.

David Doll has joined APSS as a Dangerous Goods Inspector in the Red Deer District Office after a career that has included 28 years with the RCMP.

The new Executive Director of the Dangerous Goods Control Division is **Shaun Hammond**, who was formerly Acting Executive Director and Director of Program Operations for the division.

Larry Knight, previously a Dangerous Goods Inspector in the Edmonton District Office, has been appointed as a Special Investigator at APSS headquarters in Edmonton.

Bonnie Shulman started work in August with the APSS Communications Group in the newly created position of Information Officer. She was formerly the senior copy writer at Cala Advertising in Calgary.

Medical facilities tend to follow the principle of universal precautions and treat biomedical wastes as infectious for the purposes of handling.



Biomedical wastes: A thorny issue proves a tough conundrum

by Shaun Hammond, Executive Director
Dangerous Goods Control Division

Editor's Note: Unlike other product profiles covered in previous issues of Insight, there is no universal agreement on how to handle biomedical wastes. This profile provides an update on recent developments on the issue, and has been extracted from a paper called An Overview of the Handling of Biomedical Wastes, which Mr. Hammond presented at the Haztech Canada (Western) Conference last November in Calgary.

The handling of biomedical waste is an issue that has been under review and discussion for a considerable period of time in Alberta.

High-profile incidents, such as the beach-front problem on Long Island, and more topically, the disposal problems at some hospitals in the Calgary area, have focused public attention on this issue. When combined with the overall increase in environmental awareness in Canada, the handling of biomedical wastes has become a priority subject among various municipal, provincial and federal departments.

At this time, solutions to the biomedical waste issue are being developed in concert by the federal and provincial governments. The process is, however, dynamic, and readers are urged to ensure that the requirements within their jurisdiction are fully researched before implementing changes to existing, or planned, biomedical waste handling systems.

A burning issue

For many years, waste disposal from medical facilities has been accomplished with relatively little in the way of regulation, other than the Public Health Act.

The problems associated with biomedical wastes in Alberta have a number of root causes. The first change, introduced in the early 1980s, was an amendment to the standards set under the Clean Air Act. The net effect was to put a great deal of pressure on the medical facilities to improve the quality of the emissions from on-site incinerators. As a result of this change, a number of medical facilities were forced, over time, to shut down their incinerators and find alternative methods for the disposal of their waste.

At this time, a working group formed by Alberta Public Safety Services (APSS) was reviewing the issues associated with the transportation of diagnostic specimens, and the difficulties surrounding the classification, packaging and transportation of these samples to medical laboratories for testing. An area of concern noted by Alberta Environment representatives was the disposal of biomedical wastes at in-situ incinerators where tail-gas scrubbing units had not been installed, and where emissions were tending to exceed licence limits.

As time progressed, a Pandora's box was opened and the issue of biomedical wastes soon exceeded that of

shipping diagnostic specimens in complexity.

Defining a biomedical waste

The definition of a biomedical waste was the first and most difficult issue to solve. There are a number of regulatory bodies that have some jurisdiction over the handling and disposal of these wastes and the problem of reaching a consensus has been compounded by the fact that a national solution was being sought. How the regulators approach the issue of defining biomedical waste that has to be treated as infectious will greatly influence the cost of waste management for the medical facility and ultimately determine, for many generators, the disposal.

Using Alberta as an example, the Waste Management Regulations under the Public Health Act include references to pathological, hazardous and biological wastes. The impact of these particular regulations is, among others, that these wastes may be disposed of in specified locations. However, for these wastes to arrive at their destination, transportation is required and the shipper then has to refer to the requirements under the Transportation of Dangerous Goods Control Act (TDGCA). This, in turn, is referenced by the Hazardous Waste Regulations under the Hazardous Chemicals Act, and deals with the storage, disposal and manifesting requirements. The problems are



Infectious wastes with the greatest potential to transmit disease include contaminated sharps, human blood, pathological wastes and laboratory wastes.

compounded if federal regulations are added.

Under the conventional approach in TDGA, a dangerous good is defined as meeting certain chemical or physical properties, with one exception: Infectious Substances, Class 6 Division 2 materials. This is a critical difference, and one which is not confined to the Alberta or Canadian regulatory approach. The classification process drawn from the Transportation of Dangerous Goods Regulations requires the generators of the waste to identify which of the nine hazard classes reflects the hazard of the wastes.

More confusion than clarity

In general, the process involves a chemical test or comparison to a known set of criteria. Currently, generators have to determine the classification of a waste infectious substance by reference to Schedule VII of the Transportation of Dangerous Goods Control Regulations and comparison to a list of known microorganisms. Schedule VII was designed, inter alia, to deal with international transportation of microorganisms, the shipment of highly infectious diagnostic specimens, but not with regional biomedical waste disposal problems. This results in more confusion than clarity.

In a background paper for the U.S. Congress by the Office of Technology Assessment, a detailed review of the approach adopted by the U.S. Environmental Protection Agency (EPA) and the Centre for Disease Control (CDC) addresses this issue. It has been noted (in 1987 by W. Rutala

in *Infectious Waste — A Growing Problem for Infection Control*) that "no tests exist to objectively identify infectious wastes, unlike the case with chemical or radioactive wastes". This has caused the various regulatory and standard-setting bodies in the U.S. to further refine the definitions by referring to waste characteristics. This is exactly the pattern followed in Canada, in a parallel review of the situation.

A number of proposals have been put together, and in general, the focus is on the following types of biomedical wastes: Anatomical waste, both human and animal; non-anatomical waste; and sharps. Using these three groups as a basis for definition, the task then becomes one of determining which of the wastes arising from medical facilities, included in one of these groups, should be exempted because of a low or no hazard property. One of the more challenging aspects is to draft this definition to exclude wastes which have been disinfected or deactivated to such an extent that no hazard exists.

The trend, as indicated, is to define the biomedical waste as infectious, based on the source of the waste, where generators would not have to resort to a test protocol. This approach will resolve the current problems of having to compare the waste to a list of infectious microorganisms.

A complicating factor is the trend in medical facilities towards the principle of *universal precautions*, where all blood-and-body-fluid contaminated material is deemed to be infectious for the purposes of handling. Using this approach, a large proportion of

medical waste falls into the Class 6 Division 2 classification, and would be fully regulated under TDGA.

The conundrum

This process demonstrates the conundrum surrounding biomedical wastes: It is well established that there is no absolutely credible basis for considering that the classification under TDGA is valid, and perhaps the waste should be treated as non-hazardous in transport. Yet under the principles of universal precautions, the waste is handled as hazardous in the originating hospital.

The question to be answered is — should the transport and disposal conditions mirror the precautions undertaken in the originating site? Obviously the trend among the regulatory agencies is to err on the side of safety, and to require the handling and transporting of the wastes as if they were deemed to be infectious and specify additional precautions for these wastes. This approach infers the same level of protection for the handlers and transporters of the waste, and for the emergency response teams, as for the staff of the medical facility.

It should be noted that the Centre for Disease Control (CDC) in the U.S. has clarified some of the issues surrounding its guideline on universal precautions. In June 1988, the CDC modified its stand on universal precautions to indicate that the recommendations are intended to protect the health care workers, and do not address waste management practices. There appears to be underlying agreement among the regulatory bodies in the U.S. that (as stated in the



Should biomedical waste be treated as non-hazardous in transport?

background paper prepared by U.S. Congress Office of Technology Assessment), "notwithstanding the risk perceptions and anxieties associated with the fear of contracting AIDS, those categories of infectious wastes that possess the greatest potential to transmit disease are contaminated sharps, human blood and blood products, pathological wastes (primarily body fluids) and laboratory wastes".

The consultative process among the Canadian authorities, as quoted in the same background paper, appears to have reached much the same conclusion, that "given the consistent recognition of the potential hazards from these wastes, either due to known disease association or risk of accidental injection, their 'prudent' handling and proper disposal are warranted".

Packaging for transport and disposal

The current requirements under the Transportation of Dangerous Goods Regulations for the packaging and transportation of the biomedical wastes, (assuming that the generator has determined that the waste is infectious, or reasonably believes the waste to be so), are prohibitive. This results from the fact that the TDG Regulations are currently written to deal with the small infectious diagnostic specimen. (The bulking of the waste is, in fact, prohibited.)

To resolve the problem, Alberta Public Safety Services (APSS) has issued permits which set out the conditions for the packaging and transportation of the waste in Alberta. These permits are defined in

the Regulations as Permits for Equivalent Level of Safety, and exempt the generator from the exacting requirements, provided that the conditions of the permit are followed.

In general, APSS has attempted to try and read the direction that the amendment process is taking, drafting the permits accordingly to avoid major changes to the industry once the federal authorities have implemented the amendments to the Transportation of Dangerous Goods (TDG) Regulations.

Packaging There are two types of packaging proposed, those for sharps, the other for the anatomical and non-anatomical wastes. For sharps and similar wastes, where the hazard is the potential for a cut or puncture (needlestick), Transport Canada proposes a securely closed polyethylene pail meeting the requirements of the standards set out in the *Railway Packaging Standards of Canada*. An equivalency is provided for in the proposed amendment. The packaging proposals for the non-sharps comprise a 3.0 mil linear low density polyethylene bag, and a rigid outer container that may be a polyethylene pail, a fibre drum, or a fibreboard box, all complying with the *Railway Packaging Standards of Canada*. Reusable bins are proposed as an alternative outer packaging, with a requirement for decontamination after use.

Transportation requirements Right now, the only requirements for the transportation of biomedical wastes can be construed from the TDG regulations as they apply to infectious substances. Amendment Schedule L, as currently proposed, sets

out the direction that Transport Canada is considering for the regulation of biomedical wastes.

Documentation At this time, the proposal includes the requirements for the Hazardous Waste Manifest, with the only variation proposed being for the small generator where the carrier may use a trip sheet for consignments under 50 kg or 50 L. The carrier will, however, have to consolidate the shipments on to a regular manifest for transportation to a disposal site.

Safety marks The Class 6 Division 2 label is required for the containers; however, there is no placard specified in the regulations for this class and division. In Alberta, the permits issued to date have specified a DANGER placard for vehicles hauling biomedical waste. Transport Canada is reviewing options in this area.

Vehicle requirements The proposed amendments include specific vehicle requirements, including a dedicated vehicle, with a lockable cargo area, and fitted with a refrigeration unit and a sump of at least 130 L capacity. These last two items are under review and may be modified in the final proposal.

Other requirements In the past, Alberta Public Safety Services has imposed two other special requirements due to the fact that the loads are non-standard. The carrier, under the Alberta permits, must adhere to the requirements of local Dangerous Goods Route by-laws, notify the local authorities (usually the local fire department) that such movements are taking place, and provide the local authorities with such details as

they may require.

Ensuring public safety

There are a number of options available in the search for the most effective solution to the issue of biomedical waste handling and disposal. The challenge to the regulators is to develop a system that adequately addresses the concerns of the regulated community and the general public in relation to the safe transportation and disposal of this type of waste.

In Alberta, there are a number of initiatives under way which have the potential to resolve the problem on a provincewide basis, with the needs of generators of all sizes being addressed by way of alternatives presented by private industry and regional hospital authorities. The resulting biomedical waste management system will ensure that the public safety aspects of handling and disposal will be well safeguarded.

New emergency response seminar

A new one-day seminar — Emergency Response to Any Man-made or Natural Disaster — has been tentatively scheduled for April 18, 1991 at Mount Royal College in Calgary.

The result of a co-operative educational venture between Mount Royal College and Alberta Public Safety Services, the seminar is intended to familiarize participants with government emergency response organizations in Alberta, and provide an introduction to dangerous goods and hazardous materials. Municipal officials, plant operators, emergency planners and carriers and shippers of dangerous goods are invited to attend.

Some of the topics to be discussed include federal and provincial legislation, the government emergency organizations and Calgary's emergency response organization. A special session will also be held on dealing with the media in emergency situations.

For further information, contact: Grahame Blundell, Director of Communications, Alberta Public Safety Services, 10320 - 146 Street, Edmonton, Alberta T5N 3A2, telephone 451-7111 or fax 451-7199, or in Calgary, Julie Lockhart, Faculty of Extension, Mount Royal College, 4725 Richard Road S.W., Calgary, Alberta T3E 6K6, telephone 240-6013 or fax 240-6040.

Dangerous Goods Route Information — Alberta

The Minister responsible for Alberta Public Safety Services has approved the following by-laws under Section 17(2) of the Transportation of Dangerous Goods Control Act;

Municipality	By-Law Number
Beaumont	272
Blackfalds	636
Bonnyville	999-88
Calgary	67M87 (Amended 9M89)
Camrose	1583/88
Edmonton	5590, 8649, 8734 9147, 9341*, & 9446*
Fort McMurray	88/37 (Amended 88/44)
Fort Saskatchewan	C18-88
Grande Prairie	C-882
High River	3578/87
Lethbridge**	4344
Okotoks	18-88
Red Deer	2942/87 (Amended 2942/ B-88)
St. Albert	35/87 & 20/88
Spruce Grove	C-42-87
Stettler	1622
Strathcona County	25-88
Wainwright County	89-02

*Amended by-law

**New by-law

By-Laws Under Development

Airdrie	Legal
Banff	Lloydminster
Brazeau (Municipal District of)	Medicine Hat
Brooks	Morinville
Didsbury	Olds
Drayton Valley	Parkland #31 (County of)
Drumheller	Provost
Eaglesham	Radway
Edson	Stony Plain
Gibbons	Sundre
Lacombe	Sylvan Lake
Lamont	Taber
Leduc	Whitecourt

New dangerous goods video

The Alberta Public Safety Services (APSS) Training Division has recently produced its second training video. The first one — *The Five Stages of Rescue* — has gained wide acceptance throughout North America and Europe, and is now followed by *On-Highway Inspection of Dangerous Goods*.

This new video was made on location with the assistance of the RCMP and staff of APSS. It is 18 minutes long and details in three modules what the inspector must know when inspecting transport vehicles on the highway. It covers the classification of dangerous goods, the required documentation and shipping documents and the correct certification of training that every driver must have before transporting dangerous goods.

The video can be purchased for \$45 (Cdn) by writing to: Communications Branch, Alberta Public Safety Services, 10320 - 146 Street, Edmonton, Alberta T5N 3A2. Please make your cheque out to the Provincial Treasurer.

Dangerous goods instructors' course

The dates for accreditation courses for dangerous goods instructors have been set for the first part of 1991.

The Northern Alberta Institute of Technology (NAIT) in Edmonton will offer the course from Jan. 21-25, March 18-22 and June 3-7. In Calgary, the Southern Alberta Institute of Technology has scheduled the course for Jan. 14-18, March 4-8 and May 13-17.

The course, which began in 1988, is designed for dangerous goods instructors who train people in the safe handling and transportation of dangerous goods. To receive accreditation, participants at the course must pass an examination administered by NAIT or SAIT. The accreditation is voluntary, and is intended to help standardize training for carriers of dangerous goods.

The instructors' course is held at various times throughout the academic year. For further information, contact Harold Hayter, Manager, Training in Business and Industry, Division of Continuing Education, NAIT, 11762 - 106 Street, Edmonton, Alberta T5G 2R1 (phone 403-471-7584, fax 403-471-8583); or Eric Theisen, Chemical Technologies Department, SAIT, 1301 - 16th Avenue N.W., Calgary, Alberta T2M 0L4 (phone 403-284-7134, fax 403-284-8728).

NAIT is also offering a new highway carrier course to provide basic information for drivers transporting dangerous goods. The course is available in a one-day format, or three consecutive evenings. For more information, contact Harold Hayter at the address and phone number listed in the previous paragraph.

NAIT and SAIT also offer several short courses, such as NAIT's new highway carrier course and SAIT's transportation of dangerous goods at the work-site.

1991 Course Schedule Alberta Public Safety Services, Training School

Note: Course dates are subject to change.

January 21 - 24	#9026	Emergency Site Management
January 21 - 24	#9027	Emergency Public Information Officers
February 12 - 14	#9028	Disaster Health Planning Seminar
February 19 - 21	#9029	Municipal Disaster Services Program Management
March 4 - 8	#9030	Rescue Leaders
March 6 - 7	#9031	Dangerous Goods Carriers & Shippers (Provincial Employees)
March 12 - 14	#9032	Dangerous Goods Response Seminar

Proposed Courses

April 8 - 11	#9101	Emergency Site Management
April 8 - 11	#9102	Emergency Response Public Information Officers
April 12	#9103	Emergency Response Public Information Officers (for Provincial Public Affairs Staff)
April 23 - 25	#9104	Municipal Disaster Services Program Management
May 7 - 8	#9105	Dangerous Goods Carriers & Shippers (Provincial Employees)
May 14 - 16	#9106	Dangerous Goods Response Seminar
May 22 - 23	#9107	Disaster Social Services
June 3 - 7	#9108	Rescue Leaders
August 20 - 22	#9109	Municipal Disaster Services Programme Management
August 27 - 28	#9110	Dangerous Goods Carriers & Shippers (Provincial Employees)
September 10 - 12	#9111	Dangerous Goods Response Seminar
September 18 - 19	#9112	Disaster Social Services
October 22 - 24	#9113	Disaster Health Services Seminar
November 4 - 7	#9114	Emergency Site Manager
November 4 - 7	#9115	Emergency Response Public Information Officers
November 18 - 22	#9116	Rescue Leaders
November 27 - 28	#9117	Disaster Social Services

In addition to these courses, the Alberta Public Safety Services Training School also offers numerous basic rescue courses and dangerous goods awareness courses. To attend a course, contact your local Director of Disaster Services.

For further information, contact:

Director of Training
Alberta Public Safety Services
10320 - 146 Street
Edmonton, Alberta
T5N 3A2
(403) 422-0346



P.O. Box 10,000
Edmonton, Alberta T5J 2P4
If undeliverable, return to the above address.

